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10/733,579	12/12/2003	Kyung-Ah Kim	Q77326	8600

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EXAMINER	
ANDRAMUNO, FRANKLIN S	

ART UNIT	PAPER NUMBER
2424	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/733,579	KIM, KYUNG-AH	
	Examiner	Art Unit	
	FRANKLIN S. ANDRAMUNO	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/28/09*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15, 17-19, 21, and 23-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15, 17-19, 21, and 23-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12/28/09 have been fully considered but they are not persuasive. Applicant argues on page 3 first paragraph, “Dagtas does not teach or suggest the claimed feature of the 'search frequency corresponds to a frequency at which the search terms are input from the external input device.'" Examiner disagrees. Lee teaches on (column 5 lines 14-15) the keywords in the list could each be ranked based on frequency or frequency weighted by the context in which the keyword appeared." This clearly teaches the search frequency corresponds to a frequency of the search terms. In addition, Dagtas teaches the search term can be inputted externally. Dagtas teaches on (page 4 paragraph (0055)) controller (250) generates and sends a message to the user through multimedia processor (240) and display unit (130) asking the user to input a desired search field weight factor for each search field. This clearly shows the input from an external device taught by Dagtas.

In addition, applicant argues on page 3 second paragraph, “Dagtas do not teach or remotely suggest a frequency at which the search terms are input from the external input device.” This argument was addressed on the previous paragraph.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 7, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robarts et al. (US 2005/0278741) in view of Lee et al. (US 6,463,428) in view of Dagtas et al (US 2003/0093260 A1).

Regarding claim 1, Robarts et al. ("Robarts") teaches a content program information search system comprising: a server (Fig. 3--42) logically connected to a first database (Fig. 3--EPG database 86) configured to store a plurality of search terms inputted from external devices (paragraph 48, 49 and 85); and a digital signal receiver configured to detect and to display for a selected search term of the plurality of search terms at least one of a content signal and detailed content information from a digital signal transmitted from a transmitter (paragraph 77, 82), wherein said server is configured to extract from the first database and to transmit to the transmitter at least one transmission search term of the plurality of search terms (paragraphs 47, 48 and 49).

Robarts, however, is silent in teaching extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter.

In analogous art, Lee et al. ("Lee") teaches extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one

transmission search term transmitted from the transmitter (col. 5, lines 1-16--extracted keywords could be ranked based on frequency in which the keyword appeared; col. 7, lines 19-29--server operating offsite through a link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

However, Robarts and Lee are silent in teaching a system wherein the search frequency corresponds to a frequency at which the search terms are input from the external input device. Dagtas teaches on **(page 4 paragraph (0045))** controller (250) comprises metadata search module (330) which compares search words specified by a user with words contained within a metadata. In addition **(paragraph (0048))** teaches computer software (350) comprises exclusive metadata search application (430), word pair database (450), rank value calculation application (460), priority assignment application (470), and recording priority update application. Further, **(figure 3)** shows the multimedia processor (240) has inputs from the external metadata search module (330), computer software (350), etc.

Therefore, it would have been obvious at the time of the invention to include the use of a search frequency at which the search terms are input from the external input

device. This is a useful combination because the system is capable of browsing through a list of keywords and filtering them before inserting them to a dictionary.

Regarding claim 2, Robarts teaches an internet service provider (Fig. 3--94) configured to provide a path to transmit the selected search term of the plurality of search terms from an external device of the external devices to the first database (paragraphs 52, 53 and 85), the external device being at least one digital signal receiver (Fig. 3--64) connected to said internet service provider.

Regarding claim 3, Robarts teaches wherein said digital signal receiver includes: a detector configured to detect the at least one transmission search term of the plurality of search terms from the digital signal (Fig. 3--74; paragraph 45); a list generator configured to generate a search term list by arrangement of the detected transmission search term (Fig. 6--202,204,206, etc.); a controller (Fig. 5--102; paragraph 63) configured to control display of the generated search term list if a user request for a search is inputted, and, if the selected search term is selected from the displayed search term list, to control the display of the detailed content information for the selected search term (Fig. 7; paragraph 82); a graphic engine configured to provide in a displayable form the search term list and the detailed content information for the selected search term according to control of said controller (Fig. 7--EPG graphical user interface); a display unit configured to display at least one of the search term list and the detailed content information provided by said graphic engine (Fig. 3--broadcast enabled

personal computer); and a communication interface configured to transmit the selected search term to the first database (paragraph 53--back channel).

Robarts, however, is silent in teaching generating a search term list based on the order of priority. In analogous art, Lee teaches generating a search term list based on the order of priority (col. 5, lines 1-16--extracted keywords in the list could be ranked based on frequency in which the keyword appeared; col. 7, lines 19-29--server operating offsite through a link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by generating a search term list based on the order of priority, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

Regarding claim 4, Robarts teaches wherein said server further comprises a second database configured to store content program guide information including the detailed content information (Fig. 3--82, 80), the server configured to transmit to the transmitter the broadcast program guide information (paragraph 47) and the at least one transmission search term of the plurality of search terms according to the order of priority (paragraph 48 and 49).

Regarding claim 7, Robarts teaches an internet service provider (Fig. 3--94) providing a path for transmitting the selected search terms of the plurality of search terms transmitted from the external devices to the first database (paragraphs 52, 53 and 85), wherein at least one external device of the external devices is a terminal configured

to input and to output data and is configured to be connected to said internet service provider (Fig. 3--66 and/or 68).

Regarding claim 23, Robarts teaches the content program information search system as claimed in claim 1, wherein the search frequency corresponds to a frequency at which the search **(The EPG then creates a unified query which combines the three queries to jointly identify programs (page 2 paragraph (0021) lines 7-9))** terms are typed in by the user **(The keypad has ten numerical keys which also correspond to associates letters (page 2 paragraph (0024) lines 4-6))**.

Regarding claim 24, Robarts teaches the content program information search system as claimed in claim 1, wherein the search frequency corresponds to a frequency at which the search terms are selected by the user **(The viewer can define a query for identify any programs mentioning (page 2 paragraph (0023) lines 8-12)).**

3. Claims 8-15, 17-19, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robarts et al. (US 2005/0278741) in view of Lee et al. (US 6,463,428) in view of Kikinis (US 7,213,256 B1) in view of Dagtas et al (US 2003/0093260 A1). Hereinafter referred as Robarts, Lee, Kikinis and Dagtas.

Regarding claims 8 and 11, Robarts et al. ("Robarts") teaches a content program information search system comprising: a server (Fig. 3--42) logically connected to a first database (Fig. 3--EPG database 86) configured to store a plurality of search terms inputted from external devices (paragraph 48, 49 and 85); and a digital signal receiver configured to detect and to display for a selected search term of the plurality of search

terms at least one of a content signal and detailed content information from a digital signal transmitted from a transmitter (paragraph 77, 82), wherein said server is configured to extract from the first database and to transmit to the transmitter at least one transmission search term of the plurality of search terms (paragraphs 47, 48 and 49).

Robarts, however, is silent in teaching extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter.

In analogous art, Lee et al. ("Lee") teaches extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter (col. 5, lines 1-16--extracted keywords could be ranked based on frequency in which the keyword appeared; col. 7, lines 19-29--server operating offsite through a link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

However, Robarts and Lee are silent in teaching the digital signal receiver is an external device. Kikinis discloses in **(column 5 lines 19-22)** the processor (410) in the described embodiment acts under program control by a program stored in program logic memory (440) to perform the previously described expanded search functions (305). Figure 4 shows the memory (440) to be external from the system.

Further, it would have been obvious at the time of the invention to include the use of an external recording digital receiver to act as an external device. This is a useful combination because an external recording device allows a system for user friendly exchange of data.

However, Robarts, Lee and Kikinis are silent in teaching a system wherein the search frequency corresponds to a frequency at which the search terms are input from the external input device. Dagtas teaches on **(page 4 paragraph (0045))** controller (250) comprises metadata search module (330) which compares search words specified by a user with words contained within a metadata. In addition **(paragraph (0048))** teaches computer software (350) comprises exclusive metadata search application (430), word pair database (450), rank value calculation application (460), priority assignment application (470), and recording priority update application. Further, **(figure 3)** shows the multimedia processor (240) has inputs from the external metadata search module (330), computer software (350), etc.

Therefore, it would have been obvious at the time of the invention to include the use of a search frequency at which the search terms are input from the external input

device. This is a useful combination because the system is capable of browsing through a list of keywords and filters before inserting them to a dictionary.

Regarding claim 9, refer to the rejection of claim 12.

Regarding claim 10, Robarts teaches wherein the digital signal receiver is an internet-accessible web television receiver (Fig. 3--64, 94; paragraph 50-- supplemental content can be web pages).

Regarding claim 12, Robarts teaches wherein said digital signal receiver includes: a detector configured to detect the at least one transmission search term of the plurality of search terms from the digital signal (Fig. 3--74; paragraph 45); a list generator configured to generate a search term list by arrangement of the detected transmission search term (Fig. 6--202,204,206, etc.); a controller (Fig. 5--102; paragraph 63) configured to control display of the generated search term list if a user request for a search is inputted, and, if the selected search term is selected from the displayed search term list, to control the display of the detailed content information for the selected search term (Fig. 7; paragraph 82); a graphic engine configured to provide in a displayable form the search term list and the detailed content information for the selected search term according to control of said controller (Fig. 7--EPG graphical user interface); a display unit configured to display at least one of the search term list and the detailed content information provided by said graphic engine (Fig. 3--broadcast enabled

personal computer); and a communication interface configured to transmit the selected search term to the first database (paragraph 53--back channel).

Robarts, however, is silent in teaching generating a search term list based on the order of priority. In analogous art, Lee teaches generating a search term list based on the order of priority (col. 5, lines 1-16--extracted keywords in the list could be ranked based on frequency in which the keyword appeared; col. 7, lines 19-29--server operating offsite through a link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by generating a search term list based on the order of priority, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

Regarding claim 13, Robarts teaches an internet service provider (Fig. 3--94) configured to provide a path to transmit the selected search term of the plurality of search terms from an external device of the external devices to the first database (paragraphs 52, 53 and 85), the external device being at least one digital signal receiver (Fig. 3--64) connected to said internet service provider.

Regarding claim 14, Robarts teaches wherein the search mode is at least one of a search mode based on search frequency, a search mode based on a proper noun extracted from the content program guide information, a search mode based on an input text, and a search mode based on a program content category (paragraph 78--categories; paragraph 82--text search mode).

Regarding claims 15 and 17, refer to the rejections of claims 11 and 13.

Regarding claim 18, Robarts teaches wherein said server further comprises a second database configured to store content program guide information including the detailed content information (Fig. 3--82, 80), the server configured to transmit to the transmitter the broadcast program guide information (paragraph 47) and the at least one transmission search term of the plurality of search terms according to the order of priority (paragraph 48 and 49).

Regarding claim 19, refer to the rejections of claim 11. In addition, Lee discloses the order of priority is based on a search frequency of the selected search term **(list could each be ranked based on frequency weighted by the context in which the keyword appeared (column 5 lines 14-16)**.

Regarding claim 21, refer to the rejections of claim 13.

4. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robarts in view of Lee in view of Dagtas, as applied to claims 1,3, 4 and 5 above, and further in view of Hori et al. (US 7,209,942).

Regarding claim 5, Robarts teaches wherein said detector is configured to detect the content program guide information from the digital signal (Fig. 3--program info), and if the user request for the search in at least one of a noun search mode based on a proper noun, a text search mode based on text input, and a category search mode based on a category is received, the controller controls searching for a desired content

program from the content program guide information according to the search mode requested (paragraph 78--categories; paragraph 82--text search mode).

Robarts and Lee are silent in teaching a proper noun extractor configured to extract at least one proper noun from the detected content program guide information and a proper noun storage configured to store the extracted proper noun.

In analogous art, Hori et al. ("Hori") teaches a proper noun extractor (Fig. 1--102) configured to extract at least one proper noun from the detected content program guide information and a proper noun storage (Fig. 1--103) configured to store the extracted proper noun (col. 7, lines 14-17 and lines 31-58; col. 8, lines 5-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts and Lee by incorporating a proper noun extractor configured to extract at least one proper noun from the detected content program guide information and a proper noun storage configured to store the extracted proper noun, as taught by Hori, in order to extract and store important words such as a proper noun (Hori: col. 7, lines 14-17).

Regarding claim 6, Robarts teaches wherein said digital signal receiver further includes: an information storage configured to store the detected content program guide information (Fig. 5--72). Robarts, however, is silent in teaching a search term storage configured to store the at least one transmission search term according to the order of priority.

In analogous art, Lee teaches a search term storage (Fig. 1--235) configured to store the at least one transmission search term according to the order of priority (col. 5, lines 1-16--extracted keywords could be ranked based on frequency in which the keyword appeared; col. 5, lines 11-14 and col. 15, lines 17-22--terms that occur with some degree of frequency could be stored in a keyword list).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by a search term storage configured to store the at least one transmission search term according to the order of priority, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANKLIN S. ANDRAMUNO whose telephone number is (571)270-3004. The examiner can normally be reached on Mon-Thurs (7:30am - 5:00pm) alternate Fri off (EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571)272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Kelley/
Supervisory Patent Examiner, Art Unit 2424